South Carolina Birth Defects Program Resource Guide

A South Carolina where healthy births are promoted, every birth defect matters, and families impacted by birth defects are supported.

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Introduction

Thousands of families in South Carolina have been impacted by a birth defect. Birth defects are structural changes which are already there when a baby is born that can affect any part of the body (e.g., heart, brain, foot). They may affect how the body looks, works, or both. Birth defects can vary from mild to severe. The well-being of each child affected with a birth defect depends mostly on which organ or body part is involved, how much it is affected, early detection, and timely entry into Early Intervention services.

Learning that a child has a birth defect can be difficult for a family. Families often feel alone when they find out about a birth defect. They are not alone. According to the Centers for Disease Control and Prevention, birth defects affect 1 in 33 babies born every year and cause 1 in 5 infant deaths. In 2004, South Carolina government officials created a way to track these important conditions through a law called "The South Carolina Birth Defects Act." The South Carolina Birth Defects Program (SCBDP) was created through this law. The SCBDP is required to monitor birth defects and refer families impacted by birth defects to services.

Currently, the SCBDP works in all South Carolina delivering hospitals to identify birth defects in pregnant women and in children under age two who have been admitted to the hospital. The program reviews medical charts for infants who may have a birth defect and classifies defects according to the type. For example, a cleft palate would be an orofacial defect, and spina bifida would be a central nervous system defect. This data is used to monitor numbers of birth defects, and to refer families to services.

The SC Birth Defects Program has an Advisory Council which helps guide the program's activities. The Advisory Council includes many of the same organizations which helped to create the law. The Greenwood Genetic Center, March of Dimes, University of South Carolina, SC Medical Association, SC Department of Disabilities and Special Healthcare Needs, and SC Department of Health and Human Services are some program partners.

In 2018, SCBDP created a strategic plan with the help of the Advisory Council. The plan helps to increase identification of birth defects that are found, and families are offered services such as referrals to BabyNet and neural tube defects prevention counseling. The council identified three main areas of focus for the program: Birth Defects Prevention, Birth Defects Research, and Birth Defects Referrals. The Advisory Council and program also created a mission and vision for the program in 2018. This mission and vision guide all activities of the program.

South Carolina Birth Defects Program Mission and Vision

SCBDP Vision

A South Carolina where healthy births are promoted, every birth defect counts, and families impacted by birth defects are supported.

SCBDP Mission

To collect comprehensive birth defects surveillance data in order
1) to understand the frequency, types, and impact of birth defects in South Carolina,
2) to develop strategies to prevent birth defects, 3) to facilitate birth defects research, and 4) to refer families impacted by birth defects to helpful services.

While not all birth defects are preventable, there are certain things women can do to help prevent some birth defects. Here are some ways to promote a healthy pregnancy:

Make a PACT to Prevent Birth Defects

Plan ahead

- Get as healthy as possible before becoming pregnant.
- Take folic acid every day.

Avoid harmful substances such as:

- Alcohol
- Cigarettes, including e-cigarettes
- Drugs that your doctor did not prescribe or recommend for you
- Lead

Choose a healthy lifestyle

- Eat a healthy diet that includes fruits, vegetables, whole grains, low-fat dairy, and lean proteins.
- Be physically active.
- Work to get medical conditions like diabetes under control.

Talk to your healthcare provider

- Get a medical checkup.
- Discuss all medications you take, both prescription and over-the-counter.
- Share your family medical history.

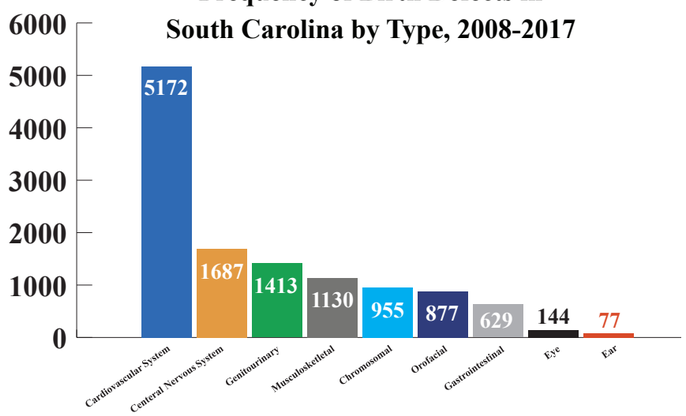
See page 18 for more information on the prevention of neural tube defects

General Information on Birth Defects in South Carolina

Data Collection

From 2008-2017, the SCBDP identified over 12,000 cases of birth defects in South Carolina from patients admitted to inpatient facilities. These cases are found through the program's partnerships with hospitals. Nurses in the program review hospital medical charts for children under age two who have a billing code associated with a birth defect in their medical chart upon discharge. Additionally, charts are examined for women who have a problem pregnancy billing code in their medical records, upon discharge. This system ensures that birth defects are counted even if the pregnancy did not result in a live birth. Many cases of birth defects result in miscarriage. Some children have more than one "case" of birth defects. For example, a baby with Down Syndrome may also have a heart defect. This baby would be counted as two cases. Cases are categorized by organ systems, including: Cardiovascular Defects; Orofacial Defects; Central Nervous System Defects; Ear and Eye Defects; Gastrointestinal Defects; Musculoskeletal Defects; Genitourinary Defects; and Chromosomal Defects.

Frequency of Birth Defects in South Carolina by Type, 2008-2017



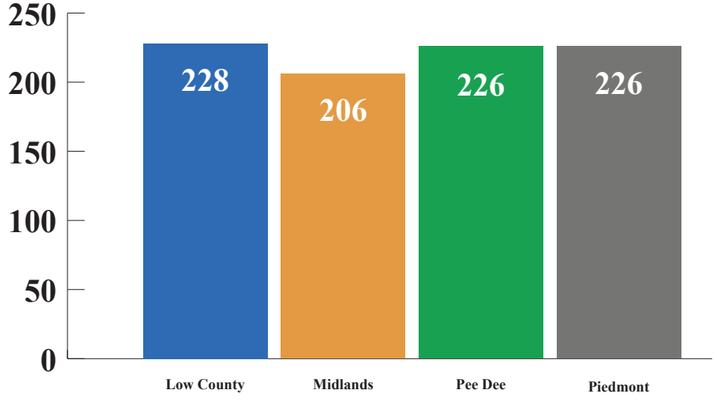
Some Gaps in Data

Unfortunately, not all birth defects are found by the SCBDP. The program is not yet able to access data from patients with birth defects who may travel to other states for delivery or care.

The SCBDP also does not look for birth defects in outpatient settings. For example, the program may miss defects found through prenatal care clinics or in pediatricians' offices. However, there are plans to expand to outpatient settings in the next five years.

Additionally, there are some birth defects the SCBDP does not currently collect. The program is exploring ways to collect these defects in additional settings. Once the program expands, it is expected that the SCBDP will find at least 100 more defects in South Carolina every year.

Prevalence of Birth Defects by South Carolina Perinatal Region, 2008-2017 (Per 10,000 live births)



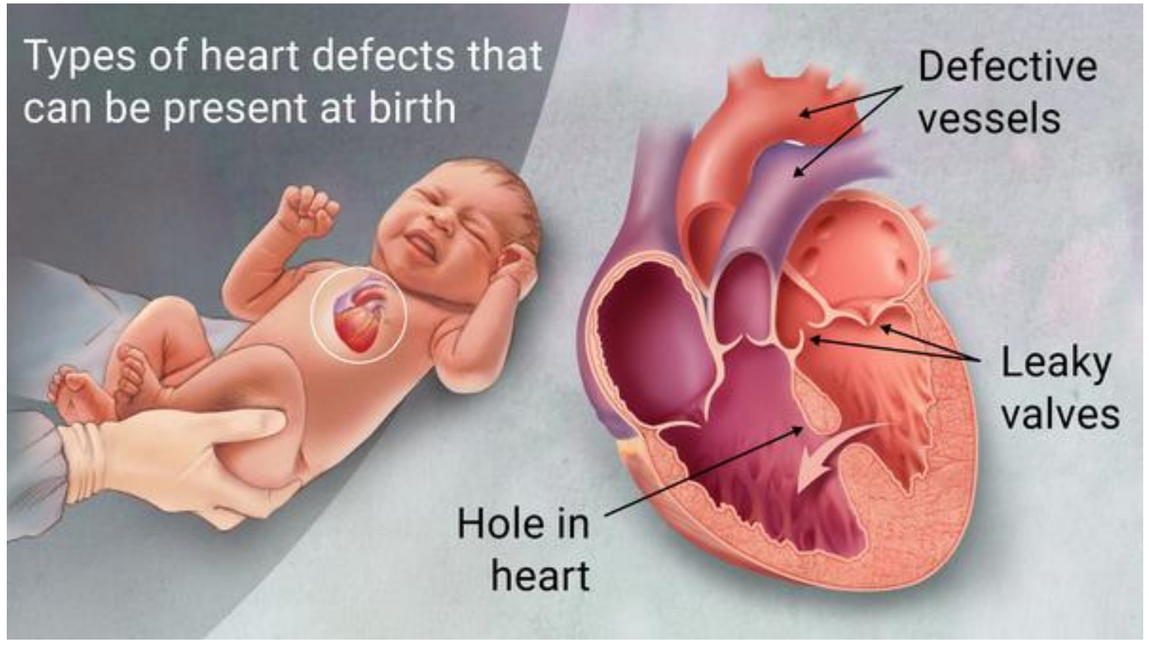
Cardiovascular (Heart) Birth Defects in South Carolina

Congenital heart defects (CHDs) are the most common type of birth defect. As medical care and treatment have advanced, babies with a CHD are living longer and healthier lives.

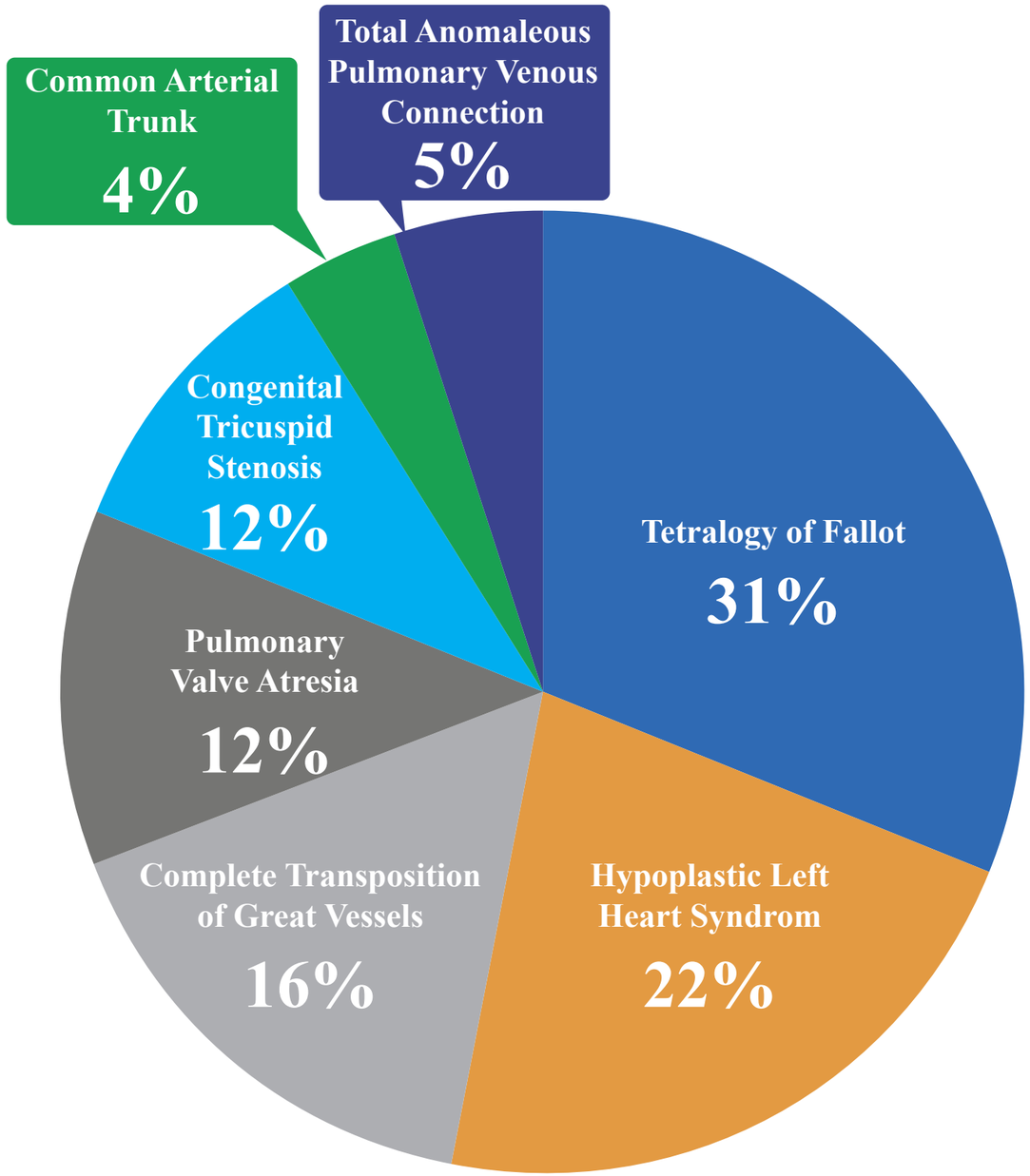
CHDs are present at birth and can affect the structure of a baby's heart and the way it works. They can affect how blood flows through the heart and out to the rest of the body. CHDs can vary from mild (such as a small hole in the heart) to severe (such as missing or poorly formed parts of the heart).

About 1 in 4 babies born with a heart defect has a critical CHD (also known as critical congenital heart disease). Babies with a critical CHD need surgery or other procedures in the first year of life. In South Carolina, the SCBDP identified 5,172 cases of congenital heart defects from 2008-2017. Many of these defects were small, and the baby did not need surgery.

Starting in 2019, the SCBDP began collaborating with five other areas in the United States to study congenital heart defects across the lifespan. This work will be funded by the Centers for Disease Control and Prevention's National Center for Birth Defects and Developmental Disabilities.



CHD By Defect Type, 2008-2017



Interview with a Parent of a Child with a Critical Congenital Heart Birth Defect

What is your name, occupation, and please share a little bit about you and your family?

Maya Troy, Client Management Director – I am originally from Jamaica where I was raised in a close-knit family. I pursued academic studies in International Business Management to the Post graduate level and later worked primarily in the banking industry until moving to the U.S.A. eight years ago to be with my husband Taj Troy – a native South Carolinian. We have two beautiful children who are my 'ikigai' i.e. reason for living – Mila, age six years and Taj Troy II, age three years. We all enjoy family time in the outdoors and traveling.

What birth defect does/did your baby have?

My daughter Mila, otherwise known as 'Miracle Mila' was born with hypoplastic left heart syndrome (HLHS). This is a birth defect that affects normal blood flow through the heart. As she developed during pregnancy, the left ventricle of her heart was underdeveloped. Hypoplastic left heart syndrome is a type of congenital heart defect, meaning it is present at birth.

What kinds of operations did she need?

Mila's palliative heart repair was done in three separate open-heart procedures by Dr. Minoo Kavarana and his very capable surgical team at the MUSC pediatric cardiology unit in Charleston, SC. These included:

Norwood Procedure- This surgery was done when she was only eight days old. Her surgical team created a "new" aorta and connected it to the right ventricle. They also placed a tube from either the aorta or the right ventricle to the vessels supplying the lungs (pulmonary arteries) so the right ventricle could pump blood to both the lungs and the rest of her body.

Bi-directional Glenn Shunt Procedure- This was done when Mila was six months old. This procedure created a direct connection between the pulmonary artery and the vessel (the superior vena cava) returning oxygen-poor blood from the upper part of the body to the heart. It reduces the work the right ventricle must do by allowing blood returning from the body to flow directly to the lungs.

Fontan Procedure- This procedure was done when she was three years old. Her surgical team connected the pulmonary artery and the vessel (the inferior vena cava) returning oxygen-poor blood from the lower part of her body to the heart, allowing the rest of the blood coming back from the body to go to her lungs.

Now that these procedures are complete, oxygen-rich and oxygen-poor blood no longer mix in her heart.

Which organizations supported you with this situation?

Not many to be honest. From the point of Mila's diagnosis in utero to her delivery, we were thrown into a world of unknowns. As a family we had to proactively research and educate ourselves about her condition, what the prognosis was and what institutions could help us navigate this new reality. Through relationships built with other parents facing similar challenges at MUSC in Charleston SC, we were referred to the following institutions that were helpful during the early stages of our heart journey:

Ronald McDonald House- was very helpful with accommodation during our long hospital stays which lasted for months.

BabyNet- an early intervention organization for infants and toddlers with developmental delays. They were able to direct me to other organizations that helped with Mila's physical, eating and developmental therapy treatments in the home

Family Connection- an organization that facilitates parent to parent support

Where did you go for your medical care?

- Sandhills Women's Care, where Mila was diagnosed in utero by my very vigilant obgyn, Dr. Douglas Addi.
- MUSC Pediatric Cardiology unit in Charleston, SC, where Mila was operated on by Dr. Minoo Kavarana and cared for by a wonderful, competent team of pediatric cardiologists, nurses and fellows.
- University Specialty Clinics, where Mila's heart health is monitored every quarter by pediatric cardiologist Dr. Rao.

Your Thoughts:

What do you wish the general public knew about critical congenital heart defects?

One in 100 babies is born with a CHD in the U.S.A. It's the most common form of birth defects and the actual cause of the heart defect is often unknown in most cases. Some CHDs can go undiagnosed for years so be vigilant about your heart health as early detection is the best chance to receive potentially lifesaving medical intervention.

How has the experience of having a baby with a birth defect impacted your family?

It has brought us closer together and expanded our faith in God and His Grace. It has given us a greater lease on life and its fragility, so we're more present and focus on enjoying all the memories we are creating with our children. There have also been many emotionally challenging moments that come with knowing the critical state of Mila's heart condition. There were also many scary moments during her surgeries and recovery periods; but through prayer, the love and support of our family, friends and the medical professionals providing her intensive care, we continue to beat the odds one at a time, one day at a time.

What do you wish you could tell other families in South Carolina with this diagnosis?

There is hope! With the advances in modern medicine, survival rates for children with this condition have improved drastically. You are not alone, even though it seems like an incredibly isolating experience at times. Advocate for your child's healthcare, seek support groups, ask for help, focus on the positives along the way, pray and never give up hope.

How can friends, family, and neighbors support a family whose baby has been impacted with a serious birth defect?

Be emotionally intelligent and sensitive to the family dealing with this health issue. See the child first and not the heart defect, this will foster more positive, healthy interactions. Do some research about the child's condition to answer some questions for yourself, as it's sometimes hard for families to talk about the diagnosis and treatment repeatedly. The best support you can provide is just being there to help where needed and most importantly to listen. Listen, console, uplift and speak LIFE over their reality.

What do you wish you could tell healthcare providers who are caring for women who have been diagnosed with this birth defect?

Be compassionate and help us navigate this new, scary world in an informed way. There are many psychological, financial and socio-economic needs that accompany such a diagnosis and parents are left to deal with them all with little or no idea how to access assistance and support.

Foster our engagement by providing the knowledge and skills for care participation, self-advocacy and future career planning. Help us to understand the prognosis and the best ways we can care for and access special care for our children from the prenatal period through their adolescence and later transition into adulthood. Being a single repository for this information as well as providing referrals to other professionals who will be of benefit: health insurance/financial counselors, social workers, mental health counselors, career counselors would be very helpful.

What do you think South Carolina can do to improve the quality of life for infants and families who have been impacted by a critical congenital heart defect?

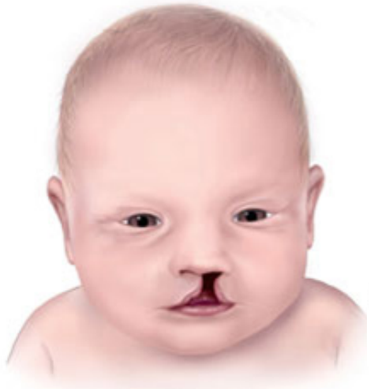
Provide federal or state programs to help with the astronomical medical costs and living expenses for families dealing with these conditions.

Drive continued advocacy and legislation for students to be trained in lifesaving CPR before high school graduation, provide opportunities for physical activity to reduce obesity in schools, guarantee that insurance not be denied for preexisting conditions, and increase public funding for CHD research and surveillance.

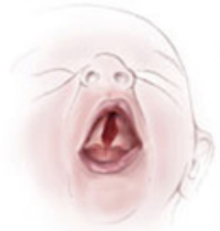
Increase surveillance of Congenital Heart Defects Across the Lifespan. While there are state-based programs tracking and researching CHDs among newborns and young children, there are opportunities to improve population-based tracking to look at the growing population of older children and adults with heart defects and their access to appropriate health care and critically need insurance coverage.

Orofacial Birth Defects

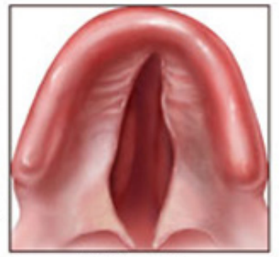
Cleft lip and cleft palate are birth defects that occur when a baby's lip or mouth do not form properly during pregnancy. Together, these birth defects commonly are called "orofacial clefts".



Baby with cleft lip



Baby with cleft palate



Cleft palate

What is Cleft Lip?

The lip forms between the fourth and seventh weeks of pregnancy. As a baby develops during pregnancy, body tissue and special cells from each side of the head grow toward the center of the face and join together to make the face. This joining of tissue forms the facial features, like the lips and mouth. A cleft lip happens if the tissue that makes up the lip does not join completely before birth. This results in an opening in the upper lip. The opening in the lip can be a small slit or it can be a large opening that goes through the lip into the nose. A cleft lip can be on one or both sides of the lip or in the middle of the lip, which occurs very rarely. Children with a cleft lip also can have a cleft palate.

What is Cleft Palate?

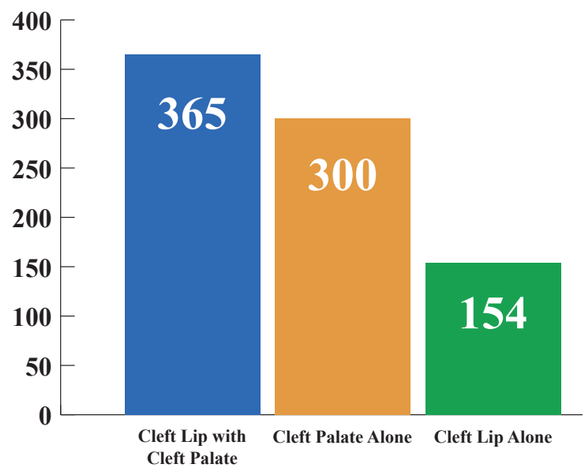
The roof of the mouth (palate) is formed between the sixth and ninth weeks of pregnancy. A cleft palate happens if the tissue that makes up the roof of the mouth does not join together completely during pregnancy. For some babies, both the front and back parts of the palate are open. For other babies, only part of the palate is open.

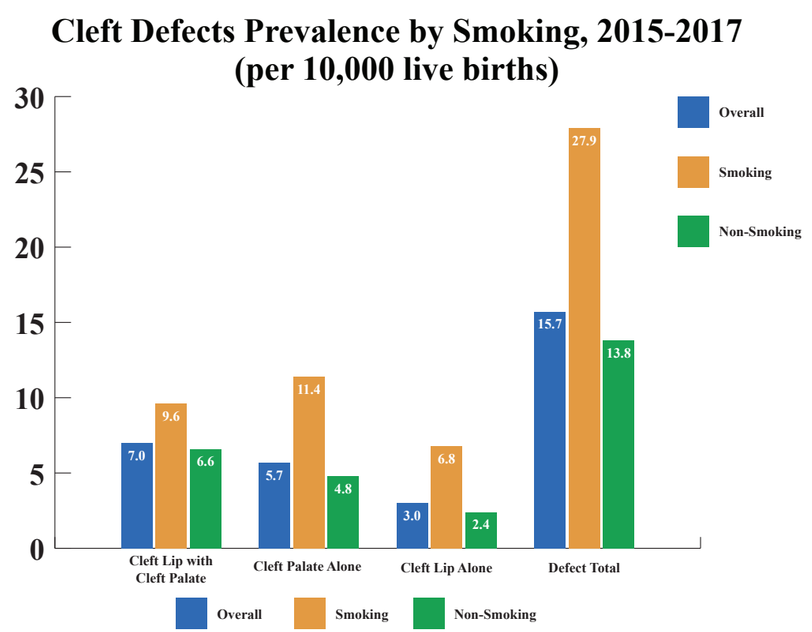
Other Problems

Children with a cleft lip with or without a cleft palate or a cleft palate alone often have problems with feeding and speaking clearly and can have ear infections. They also might have hearing problems and problems with their teeth.

Occurrence

The Centers for Disease Control and Prevention (CDC) recently estimated that each year in the United States about 2,650 babies are born with a cleft palate and 4,440 babies are born with a cleft lip with or without a cleft palate. Isolated orofacial clefts, or clefts that occur with no other major birth defects, are one of the most common types of birth defects in the United States. Depending on the cleft type, the rate of isolated orofacial clefts can vary from 50% to 80% of all clefts. The SCBDP identified 819 cases of cleft palate, cleft lip, or cleft lip and cleft palate from 2008-2017.





In South Carolina and across the United States, pregnant women who smoke have a higher risk of having a baby with cleft lip or cleft palate. In South Carolina from 2015-2017, women who smoked were 2.4 times as likely as women who did not smoke, to have a baby with cleft palate. Women who smoked were 2.9, or nearly three times, as likely as women who did not smoke to have a baby born with cleft lip.

Musculoskeletal Birth Defects

In South Carolina, there were 1,130 cases of musculoskeletal and limb defects identified from 2008-2017.

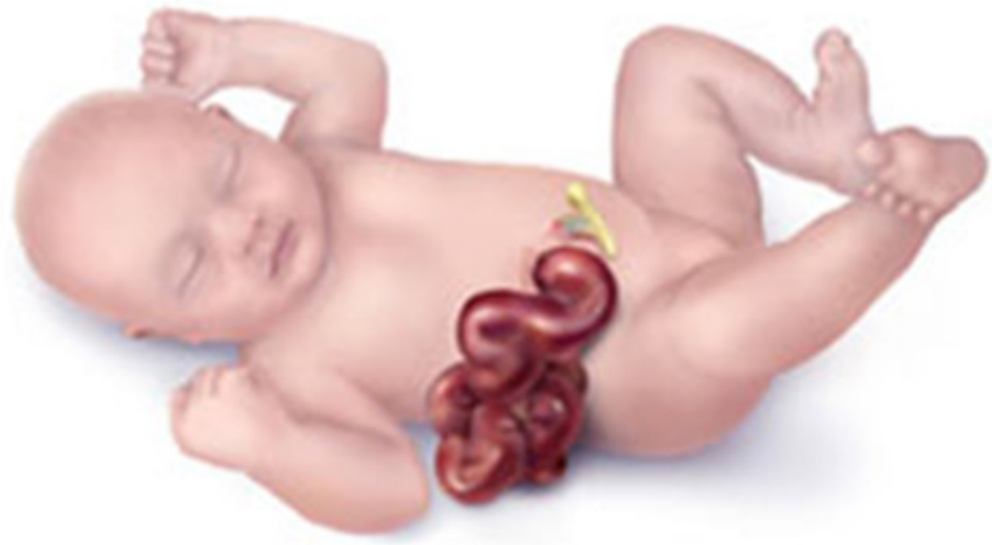
Upper and lower limb reduction defects occur when a part of or the entire arm (upper limb) or leg (lower limb) of a fetus fails to form completely during pregnancy. The defect is referred to as a “limb reduction” because a limb is reduced from its normal size or is missing. Limb defects can also impact the fingers, the toes, and the function, shape and size of the limbs.

Gastroschisis is a birth defect of the abdominal (belly) wall. The baby’s intestines are found outside of the baby’s body, exiting through a hole beside the belly button. The hole can be small or large and sometimes other organs, such as the stomach and liver, can also be found outside of the baby’s body.

Gastroschisis occurs early during pregnancy when the muscles that make up the baby’s abdominal wall do not form correctly. A hole occurs which allows the intestines and other organs to extend outside of the body, usually to the right side of belly button. Because the intestines are not covered in a protective sac and are exposed to the amniotic fluid, the intestines can become irritated, causing them to shorten, twist, or swell.

Soon after the baby is born, surgery will be needed to place the abdominal organs inside the baby’s body and repair the hole in the abdominal wall. Even after the repair, infants with gastroschisis can have problems with nursing and eating, digestion of food, and absorption of nutrients.

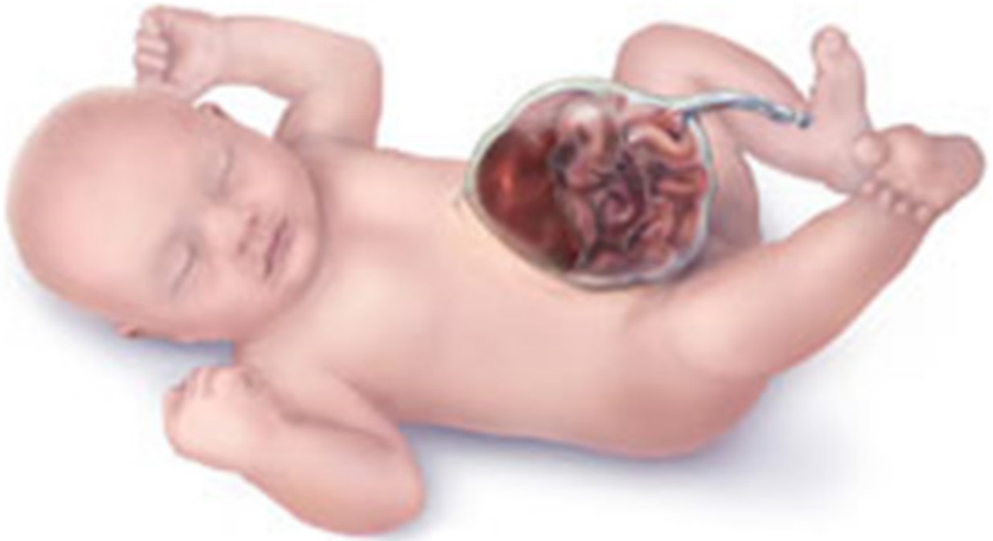
The Centers for Disease Control and Prevention (CDC) estimates that about 1,871 babies are born each year in the United States with gastroschisis, but several studies show that recently this birth defect has become more common, particularly among younger mothers.



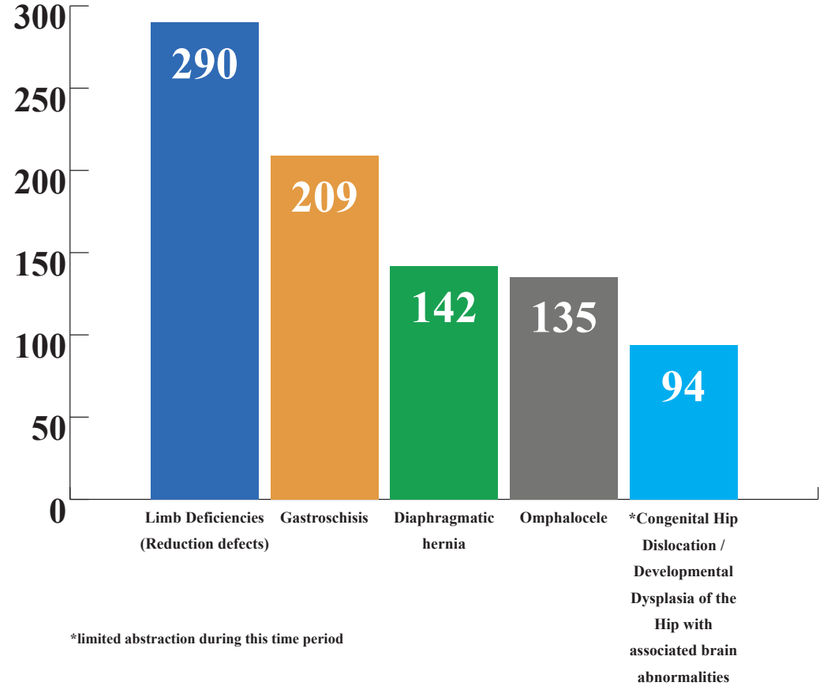
What is Omphalocele?

Omphalocele, also known as exomphalos, is a birth defect of the abdominal (belly) wall. The infant's intestines, liver, or other organs stick outside of the belly through the belly button. The organs are covered in a thin, nearly transparent sac that hardly ever is open or broken.

As the baby develops during weeks six through ten of pregnancy, the intestines get longer and push out from the belly into the umbilical cord. By the eleventh week of pregnancy, the intestines normally go back into the belly. If this does not happen, an omphalocele occurs. The omphalocele can be small, with only some of the intestines outside of the belly, or it can be large, with many organs outside of the belly.



Most Common Birth Defects Identified by the SCBDP in the Musculoskeletal System Category, 2010-2017



*limited abstraction during this time period

Gastroschisis Prevalence in South Carolina by Mother's Age, 2010-2017

Mother's Age	Frequency	Prevalence*
<20	49	12.90
20-24	90	7.66
25-29	44	3.43
30-34	18	1.80
35-39	7	1.63

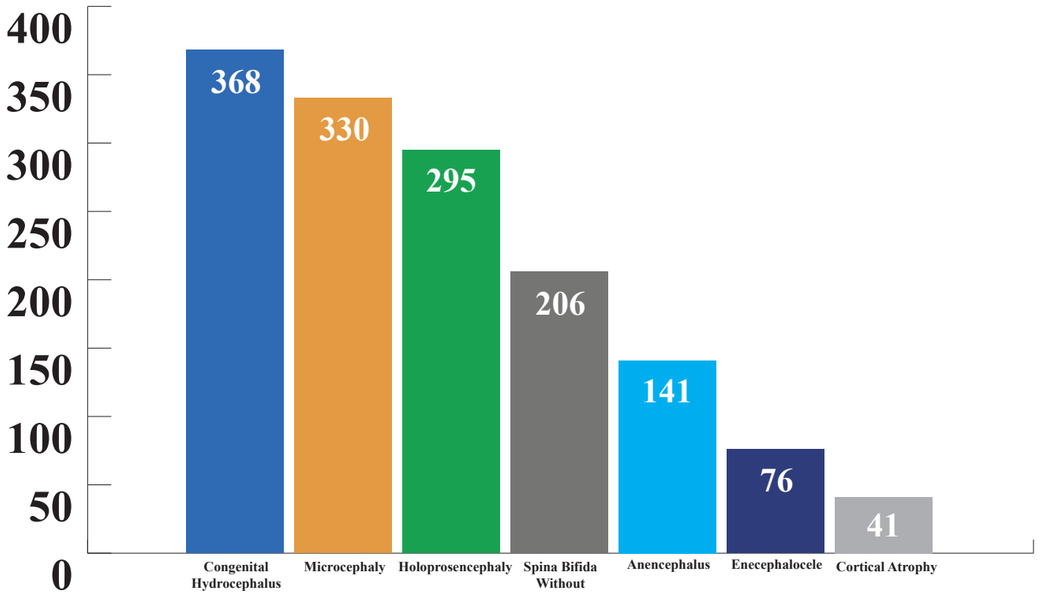
*Per 10,000 live births

Although older age has been associated with many birth defects, researchers have found that gastroschisis is more often found among younger moms. This is also true in South Carolina. From 2010-2017, mothers 24 years old and younger had nearly two thirds of all infants diagnosed with gastroschisis. The prevalence of gastroschisis was highest among very young moms, at 12.9 cases per 10,000 live births.

Central Nervous System Birth Defects

Birth defects of the central nervous system impact the brain or spinal cord. These defects can cause developmental delays and benefit from timely entry into Early Intervention services.

Central Nervous System Defects Found in South Carolina, 2008-2017



A select group of CNS defects are called neural tube defects (NTDs). The brain and spinal cord of a growing fetus develop from a simple structure called the neural tube. The neural tube 'zips up' along its length to close and protect the brain and spinal cord. If the neural tube does not close at any part along its length, the baby will have a neural tube defect. Examples of neural tube defects caused by this problem are spina bifida, anencephaly and encephalocele, and all three leave parts of the baby's brain and/or spinal cord exposed.

A range of genetic and environmental factors are thought to be responsible for NTDs, including the mother not having enough of the vitamin folate and use of some epilepsy medications. Taking folate (folic acid) before and during early pregnancy can significantly reduce the chance that a mother will have a baby with this kind of birth defect.

In the late 1990's the United States became one of the first countries in the world to fortify flour with folic acid. This caused the overall rate of neural tube defects to drop across the United States. South Carolina can proudly say it was one of the first states to fortify its flour through the Adluh flour mill, which still stands and produces many fortified products.

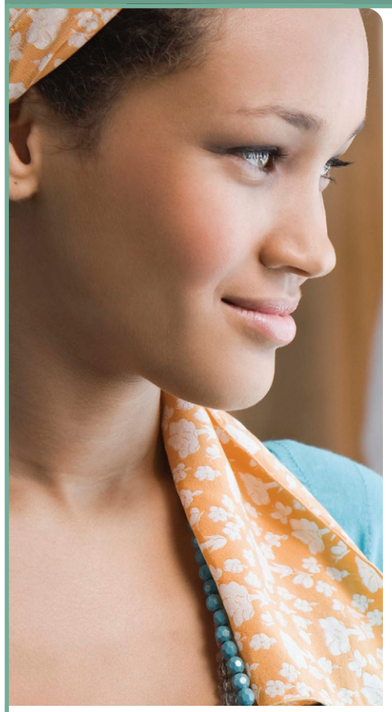
Despite the overall success of fortifying flour, women still need folic acid before and during pregnancy, and many preventable neural tube defects occur among women who did not get enough folic acid through their diet. In South Carolina, the SCBDP identified 848 cases of neural tube defects from 2008-2017. Neural tube defects were most common among White/Non-Hispanic women, but disproportionately affected Hispanic/Latina women, meaning that the prevalence was highest in among Hispanic/Latina women. The prevalence of neural tube defects among Hispanic/Latina women was nearly 10.28 per 10,000 live births versus among Black/Non-Hispanic women who had a rate of 5.34 per 10,000 live births.

Neural Tube Defects Rate in South Carolina by Race and Ethnicity, 2008-2017

Race	Prevalence*
Asian or Pacific Islander/Non-Hispanic	6.54
Black/Non-Hispanic	5.34
Hispanic	10.28
White/Non-Hispanic	6.84

*Per 10,000 live births

Facts About Folic Acid



CDC urges women to take 400 mcg of folic acid every day, starting at least one month before getting pregnant, to help prevent major birth defects of the baby's brain and spine.

About folic acid

Folic acid is a B vitamin. Our bodies use it to make new cells. Everyone needs folic acid.

Why folic acid is so important

Folic acid is very important because it can help prevent major birth defects of the baby's brain and spine (anencephaly and spina bifida) by 50% to 70%.

FACTS

How much folic acid a woman needs

400 micrograms (mcg) every day.

When to start taking folic acid

For folic acid to help prevent major birth defects, a woman needs to start taking it at least one month before she becomes pregnant and while she is pregnant.

However, every woman needs folic acid every day, whether she's planning to get pregnant or not, for the healthy new cells the body makes daily. Think about the skin, hair, and nails. These – and other parts of the body – make new cells each day.

How a woman can get enough folic acid

There are two easy ways to be sure to get enough folic acid each day:

1. Take a vitamin that has folic acid in it every day. Most multivitamins sold in the United States have the amount of folic acid women need each day. Women can also choose to take a small pill (supplement) that has only folic acid in it each day.

Multivitamins and folic acid pills can be found at most local pharmacy, grocery, or discount stores. Check the label to be sure it contains 100% of the daily value (DV) of folic acid, which is 400 micrograms (mcg).

2. Eat a bowl of breakfast cereal that has 100% of the daily value of folic acid every day.

Supplement Facts

	Amount Per Serving	% Daily Value
Folic Acid	400 mcg	100%
Vitamin B12	6 mcg	100%
Pantothenic Acid	5 mg	50%
Calcium	450 mg	45%
Iron	18 mg	100%
Magnesium	50 mg	12%
Zinc	15 mg	100%

Not every cereal has this amount. Check the label on the side of the box, and look for one that has "100%" next to folic acid.

To learn more about folic acid and how to prevent birth defects, please visit the Centers for Disease Control and Prevention website at www.cdc.gov/folicacid or call 1-800-232-4636 (CDC-INFO).

National Center on Birth Defects and Developmental Disabilities
Division of Birth Defects and Developmental Disabilities

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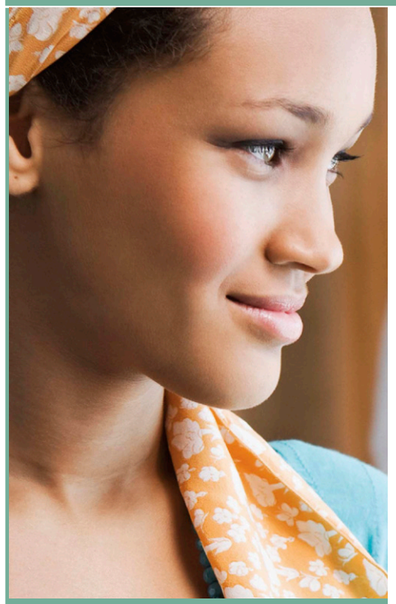
Datos sobre el ácido fólico



Los CDC instan a las mujeres a que tomen 400 mcg de ácido fólico cada día, comenzando por lo menos un mes antes de quedar embarazada, para prevenir defectos congénitos graves en la columna vertebral o el cerebro de los bebés.

Información sobre el ácido fólico

El ácido fólico es una vitamina B. Nuestro organismo lo utiliza para crear nuevas células. Todos necesitamos ácido fólico.

¿Por qué es tan importante el ácido fólico?

El ácido fólico es muy importante porque puede ayudar a prevenir la mayoria de algunos defectos congénitos graves de la columna vertebral o el cerebro del bebé (espina bífida y anencefalia).

DATOS

¿Cuánto ácido fólico necesita una mujer?

400 microgramos (mcg) cada día.

¿Cuándo se debe comenzar a tomar el ácido fólico?

Para que el ácido fólico ayude a prevenir algunos defectos congénitos graves, la mujer necesita comenzar a tomarlo por lo menos un mes antes de quedar embarazada y durante su embarazo.

Todas las mujeres necesitan ácido fólico a diario, independientemente de si están o no planeando quedar embarazada, para la producción de las células sanas que el cuerpo crea cada día. Piense en la piel, el pelo, las uñas; estas, al igual que otras partes del cuerpo producen nuevas células a diario.

¿Cómo una mujer puede obtener el ácido fólico necesario?

Hay dos maneras sencillas de asegurarse de obtener el ácido fólico necesario cada día:

1. Tome todos las días una vitamina que contenga ácido fólico.

La mayoría de los multivitaminas que se venden en los Estados Unidos contienen la cantidad de ácido fólico que una mujer necesita a diario. Las mujeres también pueden optar por tomar cada día una pequeña pastilla (suplemento) que solo contenga ácido fólico.

Las multivitaminas y vitaminas de ácido fólico se pueden comprar en la mayoría de las farmacias, supermercados y tiendas de descuentos locales. Verifique en la etiqueta que contengan 100% del requerimiento nutricional diario (DV) de ácido fólico, el cual es 400 microgramos (mcg).

2. Incluir en el desayuno cereales que contengan el 100% del requerimiento nutricional diario de ácido fólico

Supplement Facts

	Amount Per Serving	% Daily Value
Folic Acid	400 mg	100%
Vitamin B12	6 mg	100%
Pantothenic Acid	5 mg	50%
Calcium	450 mg	45%
Iron	18 mg	100%
Magnesium	50 mg	12%
Zinc	15 mg	100%

No todos los cereales tienen esta cantidad. Asegúrese de que la etiqueta impresa en la caja del cereal indique "100%" al lado de las palabra ácido fólico (o folic acid en inglés).

Para obtener más información acerca del ácido fólico y de cómo prevenir los defectos congénitos, visite el sitio web de los Centros para el Control y la Prevención de Enfermedades en www.cdc.gov/acidofolico o llame al 1-800-232-4636 (CDC-INFO).

National Center on Birth Defects and Developmental Disabilities
Division of Birth Defects & Developmental Disabilities

CS261685

Interview with Greenwood Genetic Center's Neural Tube Defects Prevention Program

Tell us about the Greenwood Genetic Center's work in Neural Tube Defects (NTD) prevention.

Greenwood Genetic Center began the NTD Prevention Program in 1992 because, at the time our rates in South Carolina were twice the national average (two in 1000 live births and fetal deaths). The program discovered if a woman would take 0.4 mg of folic acid at least 3 months BEFORE she tries to get pregnant it would reduce her chance of having a baby born with a Neural Tube Defect.

What do you think women in South Carolina should know about neural tube defects?

Neural Tube Defects are defects of the brain and spine that occur during the first 28 days after conception (before mom knows she is pregnant).

There are three types of Neural Tube Defects (NTDs) – Spina Bifida, Anencephaly and Encephalocele.

Jane Dean, RN

Coordinator, SC Birth Defects Prevention Program

What can women in the NTD prevention program expect over the course of enrollment?

Once we are notified of the NTD pregnancy after the baby is born, a letter is sent to the mother telling her a little about our program along with some brochures and articles. If the mother desires to enroll, I contact the mother to set up an appointment time to come to their home when mom and dad are both available. We usually meet after 5pm so they do not have to take time off from work. The initial visit to the home involves a questionnaire about the pregnancy, a family pedigree is drawn, any questions from mom and dad are answered and blood is drawn from mom and dad to be examined by our lab for certain studies. The increased dose of folic acid is discussed and vitamins are given to the mom. The mother is contacted by mail every three months, but if she trying to get pregnant or becomes pregnant, she will be contacted on a monthly basis to make sure she is taking her prenatal vitamins and 4 mg of folic acid and also see if there is anything we can do for her during this time.

Could you share some of your program's successes?

Because of supplementation with vitamins and fortification of breads, cereals and grains our rates have been reduced by over 60% in South Carolina. However, we still have a lot of education to do as the population who are thinking about starting a family changes all the time and we want all women to know about the importance of taking folic acid.

What would you say to women who do not think they need to take folic acid?

A lot of women think they can start their vitamins and folic acid after they become pregnant. But these defects occur within the first 28 days after conception so women should take an over-the-counter multivitamin or prenatal vitamin every day if they are capable of becoming pregnant. Over half the pregnancies in South Carolina are unplanned so taking a multivitamin or prenatal vitamin reduces the chance of having a baby with these birth defects of the brain and spine.

What advice would you give to healthcare providers caring for women at risk of having a NTD?

All women should be considered at risk of having a NTD and therefore should be given a bottle of multivitamins. They are encouraged to take the multivitamins at least three months prior to becoming pregnant or take them every day which would be even better.

Interested in learning more about the Greenwood Genetic Center's NTD Prevention Program?

Contact Jane Dean at Jane@ggc.org

Birth Defects Associated with Zika Virus

In 2015, the world became aware of an outbreak of Zika Virus in the Americas. Primarily spread by mosquitos, the virus was later found to cause brain defects in babies whose mothers were infected during pregnancy. Although the virus did not spread to most of the United States or South Carolina, the Centers for Disease Control and Prevention (CDC) helped states prepare for a possible outbreak through funding for Zika surveillance and follow-up. South Carolina was one of the funded states. In 2016, the SCBDP began collecting information about birth defects associated with Zika virus and continued to collect these conditions through 2018.

There were 344 defects associated with Zika Virus identified by the program during this time period. These birth defects can have many other causes Almost none of the mothers of these infants had been infected by Zika Virus.

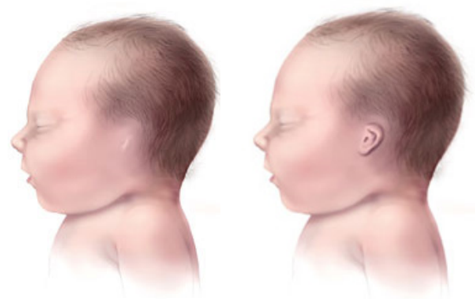
Birth defects that can be caused by Zika Virus can also be caused by many other causes such as infections.

Ear and Eye Birth Defects

Ear and eye defects are not common, but can significantly impact a child's life.

Anotia and microtia

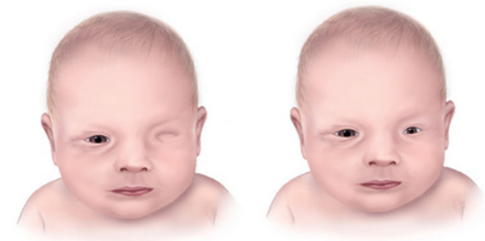
Anotia and microtia are birth defects of a baby's ear. Anotia happens when the external ear (the part of the ear that can be seen) is missing completely. Microtia happens when the external ear is small and not formed properly.

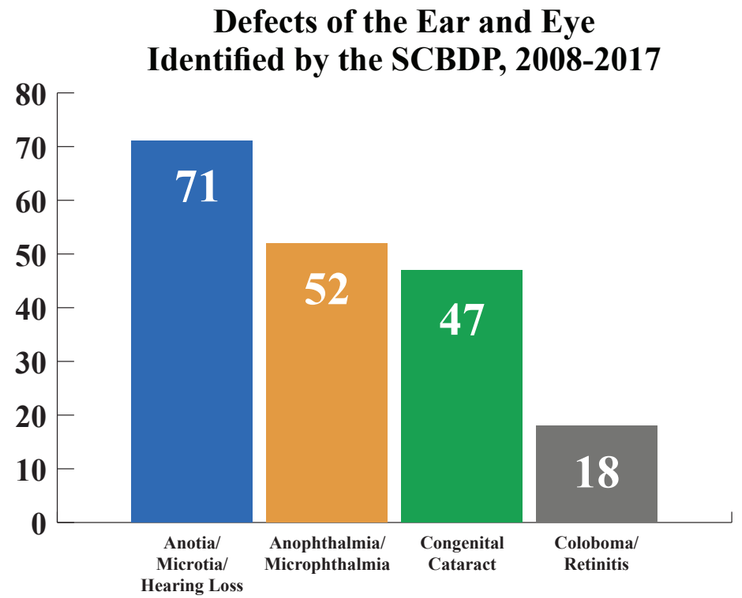


Anotia/microtia usually happens during the first few weeks of pregnancy. These defects can vary from being barely noticeable to being a major problem with how the ear formed. Most of the time, anotia/microtia affects how the baby's ear looks, but usually the parts of the ear inside the head (the inner ear) are not affected. However, some babies with this defect also will have a narrow or missing ear canal.

Anophthalmia and microphthalmia

Anophthalmia and microphthalmia are birth defects of a baby's eye(s). Anophthalmia is a birth defect where a baby is born without one or both eyes. Microphthalmia is a birth defect in which one or both eyes did not develop fully, so they are small.





Interview with a Maternal Fetal Medicine Specialist

What kind of doctor are you and could you share more about the type of work you do?

I am a Maternal Fetal Medicine Specialist. I help patients and other Obstetricians manage pregnancies that are complicated either because of complication in the mother or a problem with the baby. In some cases, I manage the pregnancy and delivery of pregnant patients and, in other cases, I perform ultrasounds and provide advice to patients and their Obstetrician.

Where do you work?

I am a Professor at the Medical University of South Carolina (MUSC) in Charleston and see patients primarily at MUSC. As part of my work at MUSC, I also see patients in Florence and Bluffton.

Where are your patients primarily located?

Our patients mainly come from the Charleston area. Through our Fetal Care Center, we see patients from across the entire state and sometimes from other areas of the country. These are typically patients with very complex problems with their baby.

Dr. Eugene Chang

Maternal Fetal Medicine Specialist

Medical University of South Carolina

I've been reading about how physicians can help diagnose or treat a baby before it is ever born. Can you tell us about some of the cool procedures you do at MUSC?

The main ways we diagnose abnormalities in babies is by using ultrasound, which allows us to see the anatomy of a baby while it is still in the womb. In certain cases, we offer testing to assess whether there may be a genetic abnormality in the baby such as Down Syndrome. This is done by amniocentesis or chorionic villus sampling.

In terms of therapeutic procedures, at times we need to transfuse a baby while it is still in the womb. We do this through a procedure called percutaneous umbilical blood sampling, also known as cordocentesis. We have also done several procedures known as EXIT procedures. This stands for Ex utero intrapartum treatment. EXIT is a modification of a cesarean section where we partially deliver the baby and a pediatric specialist (typically a Pediatric ENT surgeon) places a breathing tube into the baby. This is done in cases where we worry whether the baby's airway is blocked. Finally, some other cases that we do involve placing a small tube in the bladder or in the chest to drain fluid collections. There are several other procedures that are done to treat fetuses and we refer these patients to the larger, more specialized hospital systems.

What are some of the birth defects you come across frequently when working with your pregnant patients?

The most common birth defects we see are heart defects and problems with the kidneys or bladder. Heart defects can be the most problematic as these babies can require extensive care following delivery and sometimes require several surgeries to repair the heart. These are the cases that require a good deal of planning and coordination and why we have created a multidisciplinary clinic to see patients at MUSC.

Let's talk about healthy lifestyles. What do you think about "eating for two" when pregnant? So many of us have believed that.

Generally speaking, if you are pregnant and normal weight, there is not a need for increased caloric intake in the first trimester. However, in the third trimester, caloric requirements need to increase by about 340-450 calories daily. Energy (caloric) requirements vary by levels of physical activity, age, height, weight, and whether there is a singleton or higher pregnancy. Likewise, weight gain goals vary according to a woman's weight before pregnancy. These goals are individualized and are best discussed with a woman's obstetrics provider in early pregnancy.

Some people are choosing not to get routine vaccinations. How do vaccinations impact a growing baby?

Immunization of pregnant patients protects both mother and baby against complications of certain infections. The two most common vaccines given during pregnancy are the flu vaccine and acellular pertussis (Tdap). Ideally all women who are pregnant during flu season get vaccinated. The flu is particularly bad in pregnant patients and can cause serious medical and pregnancy complications. Inactivated vaccines are felt to be safe for pregnant, postpartum, and breastfeeding women. Tdap is given to reduce the risk of pertussis (whooping cough) in the mother and its transmission to the baby which can be lethal or cause serious complications. Transfer of antibodies also protect the baby against pertussis for 2-6 months.

A lot of people stop exercising when they find out they are pregnant, because they want to wait until their first prenatal appointment to find out if it is safe to exercise. What is your opinion?

Generally speaking, exercise during pregnancy is encouraged as part of a healthy lifestyle. It is important for pregnant patients to avoid dehydration and overheating especially in hot, humid weather. If you have not exercised prior to pregnancy, after clearance from your obstetric care provider, 10-20 minutes of light exercise such as walking three times weekly is recommended. Patients can gradually increase the frequency and intensity of their exercise as tolerated. Patients who exercise regularly can continue to do so but need to avoid overtraining. Do not strive for peak physical performance or engage in heavy resistance weight training.

What are some things women can do to help increase the chances of delivering a healthy baby?

In general, women who are healthy prior to pregnancy tend to do well. Ensuring that they are getting folic acid while trying to get pregnant is important as this helps reduce the risk of birth defects broadly known as neural tube defects. In women who have medical complications and are on medications, it is always a good idea for them to let their care provider know they are considering pregnancy. In some cases, these patients are seen by an Obstetrician or a Maternal Fetal Medicine specialist to change their medications around, to discuss whether pregnancy is an option, or to make sure they are in as good as shape as possible prior to pregnancy. This is especially important for patients with diabetes. We know that the level of sugar control a patient has prior to and during early pregnancy has a lot to do with the development of birth defects. Pregnant patients who have poor control of their diabetes have a higher risk of birth defects, however this risk can be diminished by controlling diabetes prior to and during pregnancy.

As you know, more than half of pregnancies in South Carolina are not planned. What would you say to a woman who found out she is pregnant and has not been living a healthy lifestyle?

This may sound trite but there is not much to say other than it is a good idea to adopt as healthy a lifestyle as possible to give the baby his or her best chance at normal, healthy development. Common issues we see are a result of smoking, vaping, and use of alcohol. All are felt to be problematic in pregnancy and may cause problems with a baby's normal development. Women must understand that although it is hard to stop smoking, it is definitely beneficial to quit at any point during pregnancy.

I've heard of people taking a "Babymoon" these days, meaning they have a wonderful vacation before the baby arrives. What do you tell your patients who travel abroad?

We typically focus on the timing and the location of their Babymoon. We try to ensure that a patient is not having complications related to her pregnancy that would make travel inadvisable. We review different precautions regarding travel, especially over long distances. Finally, with respect to where they are travelling, the biggest issue recently has been with respect to the Zika virus. We review updated CDC guidance on Zika and review precautions that need to be taken by patients. Pregnant patients who may travel during pregnancy should inform their obstetrics care provider and review their plans ahead of their planned travel.

What would you say to a family who did everything they could to have a healthy baby, but they have a baby with a birth defect?

Unfortunately, we see a substantial number of babies with birth defects. Most of the time we see these defects where there are no obvious risk factors. There is often some feeling of guilt when discovering a birth defect and we generally try to ensure that parents do not blame themselves unnecessarily for abnormalities that we find. We work hard to determine if there are potentially genetic causes for abnormalities to help with prediction of problems of future pregnancies and we work to find whether there are things we can do to reduce the risk of birth defects in the future such as controlling diabetes better prior to pregnancy or avoiding certain medications. Beyond that, we try to determine the best way to manage these complicated pregnancies and determine what kind of care the baby will need right after delivery so that we can determine the best circumstance in which to deliver the baby when it comes to thinking about where the patient will deliver, how far along she should be, and whether a Cesarean section may be the safest way to deliver the baby.

What information do you wish every patient knew before they come to see you for the first time?

I think that having a good working knowledge of their own medical history, family history, and medications is always a good start. In patients who have several chronic illnesses, medications can get really confusing. If in doubt, bringing all one's medications to appointments is helpful to us. With respect to birth defects, one of our biggest jobs is to educate the patient regarding the nature of the birth defect, how it may have occurred, and how it will be treated.

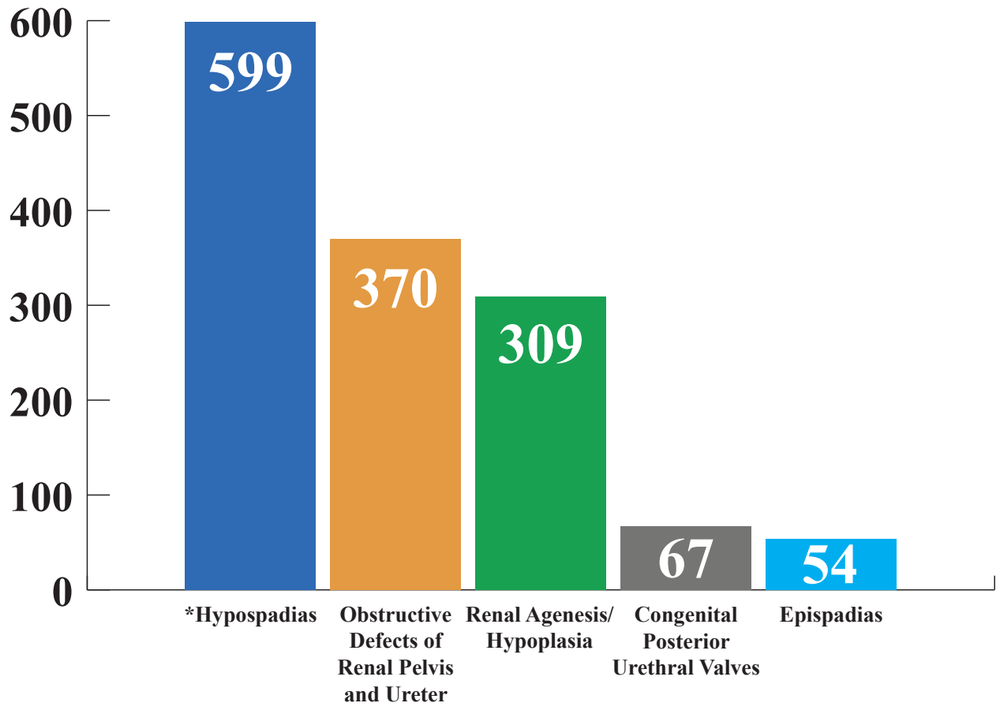
Genitourinary Birth Defects

Genital and urinary tract defects affect one or more of a baby's body parts, including:

- Kidneys- the pair of organs that remove waste from the blood and make urine
- Bladder- the sac that holds urine
- Ureters- two tubes that carry urine from the kidneys to the bladder
- Urethra- the tube that carries urine out of the body from the bladder
- Male genitals- including the penis and testicles. Testicles (also called testes) are two egg-shaped organs usually found in the sac (called the scrotum) behind the penis. They make sperm and testosterone (a male hormone). In some boys, the testes are inside the belly instead of the scrotum; this condition is called undescended testes.
- Female genitals- including the vagina, ovaries and uterus (womb)

In South Carolina, the following genitourinary birth defects have been collected: Renal Agenesis/Hypoplasia, Bladder Exstrophy, Hypospadias, Epispadias and Congenital Posterior Urethral Valves.

Top 5 Birth Defects for Genitourinary System, 2008-2017



*Beginning in 2010, data collection for this defect was limited

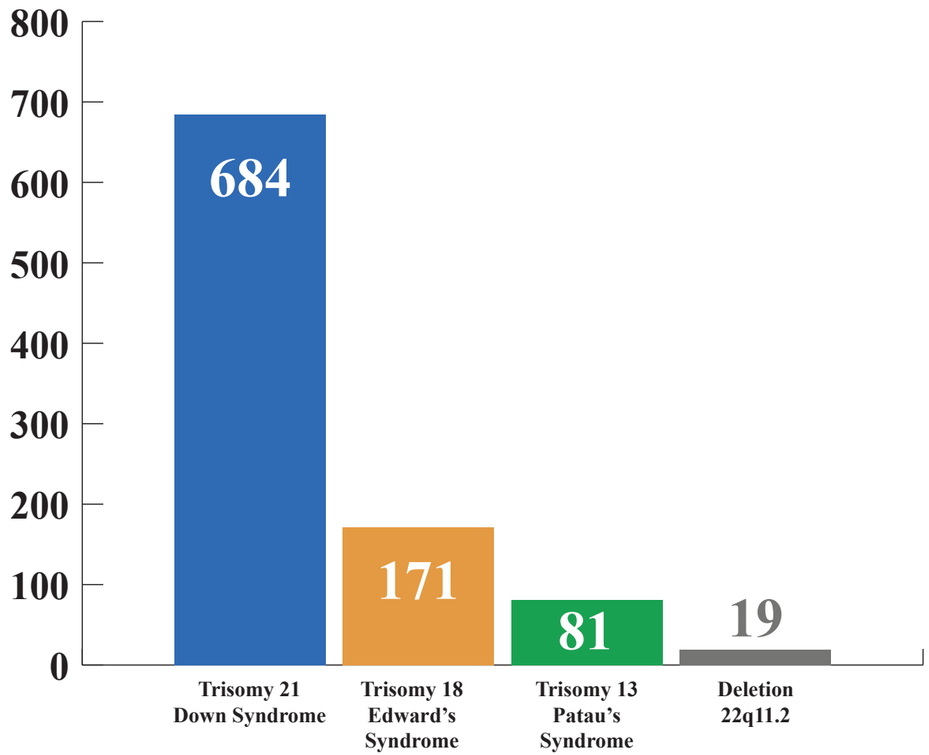
Chromosomal Birth Defects

Some chromosomal abnormalities occur when there is an extra chromosome, while others occur when a section of a chromosome is deleted or duplicated.

Examples of chromosomal abnormalities include Down syndrome, Trisomy 18, Trisomy 13, Klinefelter syndrome, XYY syndrome, Turner syndrome and Triple X syndrome.

Chromosomal abnormalities are common causes of birth defects that can affect the brain and other parts of the body. The normal fertilized egg cell contains 23 chromosomes from the mother and 23 from the father. There are normally 23 pairs of chromosomes in the fertilized egg. These include two sex chromosomes: XX for girls and XY for boys.

Most Common Chromosomal Defects Identified by the SCBDP, 2008-2017



Prevalence of Chromosomal Defects in SC By Mother's Age, 2008-2017

Mothers Age	Prevalence*
<20	9.46
20-24	7.88
25-29	10.86
30-34	13.93
35-39	48.76
40-	167.72

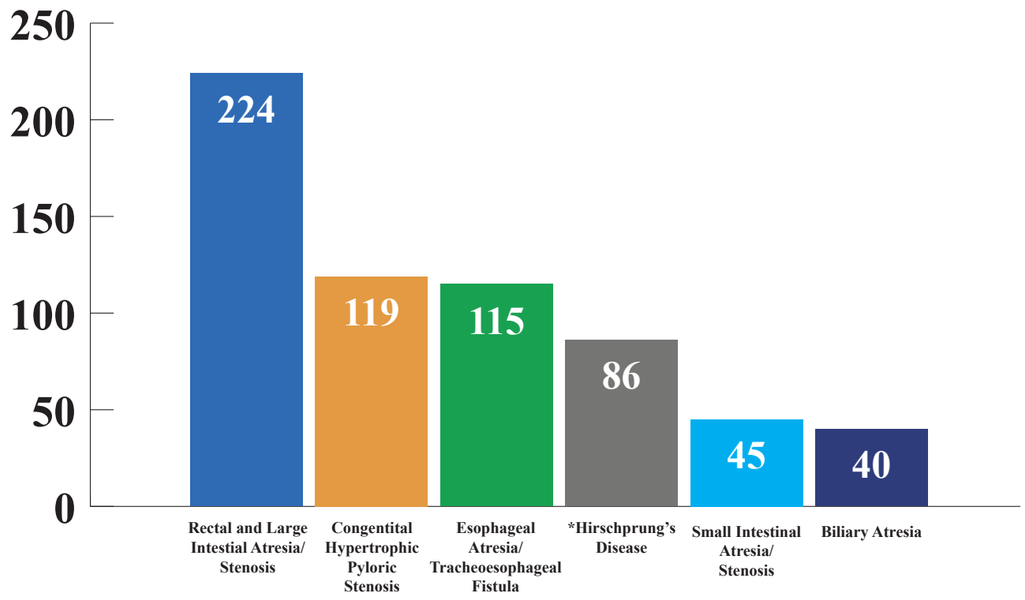
*Per 10,000 live births

In South Carolina and across the United States, older mothers were more likely to have a baby with a chromosomal defect than younger mothers. In fact, women over forty had more than three times the rate of chromosomal birth defects as women 35-39.

Gastrointestinal Birth Defects

Gastrointestinal defects significantly impact a child's well-being and quality of life. With gastrointestinal defects, the stomach or other organs may be abnormally positioned or incompletely developed, causing blockages, or the muscles or nerves of the digestive tract may be defective. Defects collected by the SCBDP include Esophageal Atresia / Tracheoesophageal Fistula, Rectal and Large Intestinal Atresia / Stenosis, Biliary Atresia, and Small Intestinal Atresia.

Gastrointestinal Defects Most Commonly Idenified by the SCBDP, 2008-2017



*SCBDP stopped collecting this birth defect on 1/1/2014

SCBDP Referrals to Early Intervention

BabyNet is South Carolina's interagency early intervention system for infants and toddlers under three years of age with developmental delays, or who have conditions associated with developmental delays. This service is free for qualifying families.

BabyNet matches the special needs of infants and toddlers who have developmental delays with the professional resources available within the community. Services are provided in everyday routines, activities and places relevant to the life of the family. BabyNet is funded and regulated through the Individuals with Disabilities Education Act and managed through South Carolina Department of Health and Human Services.

Anyone (a parent, doctor, caregiver, teacher or friend) can make a referral. Look for signs that an infant or toddler might need extra help. If you suspect a child may have a problem, the earlier you get help, the better! BabyNet Contact Information: https://babynet.scdhhs.gov/prebabynet/

SCBDP Referral Stats:

- In 2019, SCBDP referred over 1,500 children less than three years old who were identified through routine birth defects surveillance to BabyNet through a pilot project.
- Nearly 1/3 of children referred by SCBDP became eligible for services due to the SCBDP referral.
- A portion of children began services for the first time as a result of the SCBDP program referrals.
- Beginning in August 2019, the SCBDP began referring infants to BabyNet on a routine basis.

Information and Services for Families Impacted by Birth Defects

Agency	Website / Social Media	Mailing Address / Locations	E-mail	Phone Number	Ages Served
Family Connection	www.familyconnectionsc.org https://www.facebook.com/FamilyConnectionofSouthCarolina/	1800 St Julian Place, Suite 104 Columbia SC 29204	info@familyconnectionsc.org	800-578-8750	birth through adulthood
Help Me Grow	www.helpmegrowsc.org	255 Enterprise Boulevard, Suite 110 Greenville, SC 29615	info@helpmegrow.org	855-476-9211	birth until five and a half years old
Children and Youth with Special Healthcare Needs Program	https://www.scdhec.gov/health/oral-health/oral-health-resources/children-special-healthcare-needs				
Greenwood Genetic Center	https://www.ggc.org https://www.facebook.com/GreenwoodGeneticCenter.Education https://twitter.com GreenwoodGenCtr/	Greenwood: 106 Gregor Mendel Circle Greenwood, SC 29646 Greenville: 14 Edgewood Drive Greenville, SC 29605 Columbia: 1911 Thurmond Mall Columbia, SC 29201 Charleston: 3520 West Montague Avenue Suite 104 North Charleston, SC 29418 Florence: McLeod Medical Park West 101 S Ravenel Street Suite 370 Florence, SC 29506		Greenwood: 864-941-8100 Greenville: 864-250-7944 Columbia: 803-799-5390 Charleston: 843-746-1001 Florence: 843-664-2983	Before birth, birth through adulthood
Palmetto Healthy Start Sumter	https://www.palmettohealth.org/classes-events/community-outreach/community-health-initiatives/midlands-healthy-start	Midlands Healthy Start Physical address: 1333 Taylor Street, Suite 4-H Columbia, SC 29201 Mailing address: PO Box 2266 Columbia, SC 29202-2266		803-296-3780 888-788-4367	
Family Solutions of the Low Country	http://lowcountryhealthystart.com/	Low Country Healthy Start1732 Village Park Drive Orangeburg, SC 29118		803-531-8008	birth through two years postpartum

Agency	Website / Social Media	Mailing Address / Locations	E-mail	Phone Number	Ages Served
BabyNet	https://msp.scdhhs.gov/babynet/	Anderson: 919 Carolina Circle Anderson, SC 29621 Aiken: 6140 Woodside Executive Court Aiken, SC 29803 Beaufort: 12 Fairfield Road Suite 2B Beaufort, SC 29907 Charleston: 6269 Rivers Avenue Suite 309 North Charleston, SC 29406 Cheraw: 321 High Street Cheraw, SC 29520 Columbia: 200 Arbor Lake Drive Suite 100 Columbia, SC 29223 Conway: 931 Medical Circle Myrtle Beach, SC 29572 Florence: 300 Rainbow Drive Suite 103 Florence, SC 29506 Greenville: 600 East Washington Street, Suite 602 Greenville, SC 29601 Greenwood: 929 Phoenix Street Greenwood, SC 29646 Orangeburg: 191 Regional Parkway Orangeburg SC 29118 Rock Hill: 1230 Ebenezer Road Rock Hill, SC 29730 Spartanburg: 355 Cedar Springs Road Spartanburg, SC 29302 Sumter: 1147 N. Guignard Street, Suite 4 Sumter SC 29150 Walterboro: 122 Hampton Street Walterboro, SC 29488		Anderson: 864-225-6465 Aiken: 803-829-0048 Beaufort: 843-929-0874 Charleston: 843-740-3193 Cheraw: 843-624-2043 Columbia: 803-898-3311 Conway: 843-839-5045 Florence: 843-292-3501 Greenville: 864-331-1450 Greenwood: 864-225-6465 Orangeburg: 803-829-0048 Rock Hill: 803-980-5600 Spartanburg: 864-591-8641 Sumter: 803-847-5670 Walterboro: 843-782-3405	birth through three years old

Agency	Website / Social Media	Mailing Address / Locations	E-mail	Phone Number	Ages Served
Pee Dee Healthy Start	https://www.pdhs.org/	Florence: 314 West Pine Street Florence, SC 29501 Chesterfield: DHEC Building 203 North Page Street Chesterfield, SC 29709 Darlington: DHEC Building 305 Russell Street Darlington, SC 29532 Dillon: Dillon School Building 405 West Washington Street Unit 11 Dillon, SC 29571 Marion: Marion County Administration Building 1305 North Main Street Marion, SC29571 Marlboro: Social Services Building 713 S. Parsonage Street Bennettsville, SC 29512 Williamsburg: DHEC Building 520 Thurgood Marshall Boulevard Suite 4-D Kingstree, SC 29556		Florence: 843-662-1482 Chesterfield: 843-623-7304 Darlington: 843-393-8550 Dillon: 843-774-4606 Marion: 843-275-1577 Marlboro: 843-479-1183 Williamsburg: 843-354-9981	
Postpartum Newborn Home Visits	https://scdhec.gov/health/family-planning/pregnancy/postpartum-newborn-home-visits			855-472-3432	Newborns
PASOs	http://www.scpasos.org/ https://www.facebook.com/pasosprogram https://twitter.com/SCPASOs	730 Devine Street, Suite 108 Columbia, SC 2920		803-777-0188	
Home Visiting/ Children's Trust	https://www.schomevisiting.org/	1330 Lady Street, Suite 310 Columbia, SC 29201		803-733-5430	

Agency	Website / Social Media	Mailing Address / Locations	E-mail	Phone Number	Ages Served
Nurse Family Partnership (NFP)	https://www.nursefamilypartnership.org/locations/south-carolina/ https://twitter.com/NFP_nursefamily https://www.instagram.com/nursefamilypartnership/ https://www.facebook.com/nursefamilypartnership	York County NFP 1010 Devinney Road, York, SC 29745 DHEC Low Country NFP 109 W Main Street, Moncks Corner, SC 29461 Carolina Health Centers NFP 113 Liner Drive, Greenwood, SC 29646 Greenville Health System NFP 1200 West Faris Road Greenville, SC 29605 Family Solutions of the Low Country NFP 1732 Village Park Road Orangeburg, SC 29118 DHEC Pee Dee NFP 1931 Industrial Park Road Conway, SC 29526 DHEC Midlands NFP 2000 Hampton Street Columbia, SC 29204 DHEC Upstate NFP 220 McGee Road Anderson, SC 29625 McLeod Health NFP 300 South Dargan Street Florence, SC 29506 Spartanburg Regional Hospital NFP 358B Serpentine Drive Spartanburg, SC 29303	support@nursefamily.partnership.org	York: 803-818-5539 Moncks Corner: 843–214-4216 Greenwood: 864-330-8243 Greenville: 864-330-8243 Orangeburg: 864-238-3783 Conway: 803-531-8008 Columbia: 803-915-8887 Anderson: 803-576-2746 Florence: 864-716-3865	birth through two years old
First Steps	https://scfirststeps.org/ https://www.instagram.com/SCFIRSTSTEPS/ https://twitter.com/scfirststeps https://www.facebook.com/scfirststeps/	Has a local office in every single county in SC Main office: 1300 Sumter Street, Suite 100 Columbia, SC 29201		877-621-0865	birth through age five

National Resources for Families Impacted by Birth Defects

Organization	Website	Comments
National Birth Defects Prevention Network	https://www.nbdpn.org/pwg/resources_for_families.php	Provides many different national resources for birth defects based on classification of birth defect
Birth Defect Research for Children	https://www.birthdefects.org/parent-services/fact-sheets/	Provides fact sheets about different birth defects
March of Dimes	https://www.marchofdimes.org/complications/birth-defects-and-health-conditions.aspx	
National Organization for Rare Disorders	https://rarediseases.org/	Provides a database for families to learn more on birth defects

Birth Defects Prevention Resources in South Carolina

Organization	Contact Information
Smoking cessation resources 1. SmokefreeMOM 2. Quit smoking counselor 3. Smokefree Women Facebook Page 4. Apps 5. CDC social media	1. Text MOM to 222888 2. 1-800-QUIT-NOW (1-800-784-8669) 3. https://www.facebook.com/smokefree.women/ 4. QuitGuide and quitSTART 5. @CDCTobaccoFree on Facebook and Twitter, and @CDCgov/quitspiration on Pinterest
Federally-Qualified Health Centers (FQHCs) in SC 1. HopeHealth, Inc. (Florence) 2. Beaufort Jasper Hampton Comprehensive (Beaufort, Hampton, Jasper) 3. CareSouth Carolina, Inc. (Chesterfield, Darlington, Dillon, Lee) 4. North Central Family Medical Center (Rock Hill, York) 5. Eau Claire Cooperative Health Services, Inc. (Fairfield, Lexington, Newberry, Richland) 6. Family Health Centers, Inc. (Bamberg, Calhoun, Dorchester, Orangeburg) 7. Franklin C. Fetter, Inc. (Berkeley, Charleston, Colleton, Dorchester) 8. Little River Medical Center (Horry) 9. Margaret J. Weston Medical Center, Inc. (Aiken) 10. New Horizon Family Health Services (Greenville) 11. ReGenesis Community Health Center, Inc. (Cherokee, Spartanburg) 12. Sumter Family Health Center, Inc. (Sumter) 13. Sandhills Medical Foundation, Inc. (Chesterfield)	1. 600 E. Palmetto Street Florence, SC 29506 (843) 667-9414 2. 721 North Okatie Highway 170 Ridgeland, SC 29936 (843) 987-7400 3. 1268 South 4th Street Hartsville, SC 29550 (843) 332-3422 4. 1131 Saluda Street Rock Hill, SC 29730 (803) 325-7744 5. 1228 Harden Street Columbia, SC 29204 (803) 748-1181 6. 3310 Magnolia Street Orangeburg, SC 29115 (803) 531-6900 7. 51 Nassau Street Charleston, SC 29403 (843) 722-4112 8. 1608 North Main Street Conway, SC 29526 (843) 663-8000 9. 4645 Augusta Road Clearwater, SC 29822 (803) 380-7000 10. 130 Mallard Street Greenville, SC 29601 (864) 233-1534 11. 750 South Church Street Spartanburg, SC 29306 (864) 582-2411 12. 1278 North Lafayette Drive Sumter, SC 29150 (803) 774-4500 13. Highway 1 South McBee, SC 29101 (843) 335-8291

Organization	Contact Info
DHEC Family Planning	(855) 472-3432 for locations/ to make appointments https://scdhec.gov/health/family-planning
DHEC WIC	https://scdhec.gov/health/wic-nutrition-program (855) 472-3432 to make an appointment
The Care Line (411)	(855) 472-3432 The CARE LINE is a toll-free statewide helpline. The CARE LINE provides information about health care for pregnant women, infants, and children. The CARE LINE also links callers to resources that are available in the community. If you or someone you know needs help finding a doctor, getting transportation to a doctor or health department, or finding services for children, the CARE LINE is here to help
Family Planning • New Morning Foundation • DHEC	https://newmorningfoundation.org/ (803) 929-0088 info@newmorningfoundation.org 1501 Main Street, Suite 150 Columbia, SC 29201 • 61 partners • 120+ clinical sites • https://scdhec.gov/health/family-planning
PASOs – An organization serving Latino/Hispanic families with issues related to health and social services PASOs provee educación sobre la salud, capacidades positivas para la crianza de los hijos, educación en la edad temprana, apoyo individualizado a las familias que necesitan recursos y los hace de una forma culturalmente apropiada; además se asocia con los servicios de salud y servicios sociales que brinden los servicios a la comunidad de una forma más efectiva.	730 Devine St., Suite 108 Columbia, SC 29208 http://www.scpasos.org/ (803) 777-0188 @scpasos on Twitter and Instagram www.facebook.com/pasosprogram Reproductive health coordinator • kathia@scpasos.org • (803) 807-8035
Fact Forward (formerly SC Campaign to Prevent Teen Pregnancy)	https://www.factforward.org/ 1331 Elmwood Avenue, Suite 300 Columbia, SC 29201 (866) 849-0455 (803) 771-7700 info@factforward.com
GGC Neural Tube Defect Prevention Program	https://www.ggc.org/birth-defects-prevention-program jane@ggc.org (800) 676-6332

Organization	Contact Info
"The Point" Teen Clinics	https://scdhec.gov/health/child-teen-health/teens-info-services/point-teen-clinics Anderson County: • Appointments: 1-855-4-SCDHEC (1-855-472-3432) • The Point Teen Health Center at Anderson County Health Department: 220 McGee Road, Anderson, SC 29625 Beaufort, Colleton, Hampton and Jasper counties: • Appointments: 1-855-4-SCDHEC (1-855-472-3432) • The Point – Colleton, 219 South Lemacks Street Berkeley, Charleston and Dorchester counties: • Appointments: 1-855-4-SCDHEC (1-855-472-3432) • Questions? Text, call: (843) 834-5969 • The Point – Johns Island, 3574 Maybank Highway • The Point – Northwoods. 2070 Northbrook Boulevard A-20 • The Point – Goose Creek, 106 Westview Boulevard • The Point – Moncks Corner, 109 West Main Street Cherokee, Greenville, Pickens, Spartanburg and Union counties: • Appointments: 1-855-4-SCDHEC (1-855-472-3432) • Questions? (864) 381-5619 • The Point Teen Health Center at Tobias: 154 George Washington Carver Drive, Spartanburg • The Point Teen Health Center at Spartanburg County Health Department: 151 East Wood Street, Spartanburg

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